

SOUTH AFRICAN PERISPORIACEÆ.

II. REVISIONAL NOTES.

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(With three Text-figures.)

In working through a number of fresh collections of South African Perisporiaceæ, it has become evident that certain species described in my previous paper* on this group need revision. On p. 726 of the above-mentioned publication *Meliola torta* is described on the leaves of *Trichocladus crinitus*, and it is stated that there is another *Meliola* associated with this on the same leaves, with 4-septate spores and no setæ, but this was badly parasitised and could not be determined. In examining fresh collections of fungi on the same host, it has become evident that some confusion has arisen owing to the fact that there are at least four fungi (possibly more) on the same leaves.

One of these is an *Asterina*; of the others, in the first collection of *Trichocladus* the perithecia of *Meliola torta* were immature, and the spores of a fungus parasitic on the *Meliola*, and having similar perithecia, were described as those of *Meliola torta*. In later collections mature perithecia of *Meliola torta* were found with large 4-septate spores. It therefore becomes necessary to redescribe *Meliola torta*, and to describe the fungus parasitic on the two *Meliolas*. Mature non-parasitised material of the second species of *Meliola* was also found, and, as it appears to be a new species, I have named it *Meliola scabra*, on account of the frequently scabrous character of the capitata hyphopodia.

Meliola torta Doidge, char. emend.

Amphigena, maculas atras, tenues, 5–10 mm. diam. efficiens; hyphis tenuibus, 6–7 μ crassis, tortuosis, anastomosantibus, cellulis 25–36 μ long.; ramis irregularibus, plerumque unilateralibus; hyphopodiis capitatis stipitatis, tenuibus, stipitis nonnunquam septatis, cellula superiore 14–25 $\times$ 14–20 μ , diverse lobata, torta, apice obtusa v. convexa; hyphopodiis mucronatis ampullaceis, 20–36 μ long.; setis mycelicis non numerosis, sparsis, rectis, simplicibus, basi 10–11 μ cr., apice acutis; peritheciis paucis, sparsis, atris,

* 'Trans. Roy. Soc. of S A.,' vol. v, pt. 6, 1917.

globulosis, rugulosis, $250-400\ \mu$ diam. ; ascis 2-sporis ; sporidiis ellipsoideis, compressis, 4-septatis, ad septa constrictis, cellula media majore, $54-67 \times 20-22\ \mu \times 17\ \mu$.

Hab. in foliis *Trichocladii criniti*, Izelini, Kingwilliamstown Dist., 8/6/15 (9064), Woodville Forest, George, 11/11/17 (10939).

Meliola scabra Doidge, n. sp.

Amphigena, maculas atras tenues $5-10\ \mu$ diam. efficiens ; hyphis, $6-7\ \mu$



FIG. 1.—*Meliola torta*. (a) Mycelium with capitate hyphopodia ; (b) mucronate hyphopodia ; (c) superficial cells of perithecium ; (d) spores. [All figures drawn with the aid of camera lucida, with Zeiss objective D and No. 5 ocular.]

crassis, flexuosis : ramis plerumque oppositis ; cellulis $24-30\ \mu$ long. ; hyphopodiis capitatis alternis, breviter stipitatis, $23-30\ \mu$ long. cellula basali $6-7\ \mu$ long., cellula superiore ovata v. sub-uncinata, plerumque irregulariter sublobata, scabra ; hyphopodiis mucronatis inter hyphopodia capitata interspersis, oppositis v. unilateralibus, ampullaceis, apice interdum curvatis ; setis mycelicis nullis ; peritheciis atris, carbonaceis, rugulosis, $200-250\ \mu$ diam. ; ascis 2-sporis ; sporidiis 4-septatis, utrinque rotundatis, vix ad septa constrictis, $36-40 \times 14-17\ \mu$.

Hab. in foliis *Trichocladi criniti*, Izelini, Kingwilliamstown Dist., 8/6/15, leg. Emmett (9064), Woodville Forest, George, 11/11/17, leg. E. M. Doidge (10939).

In foliis *Trichocladi elliptici*, 15/3/15, Tabankulu, Transkei, leg. G. Fraser (8891).

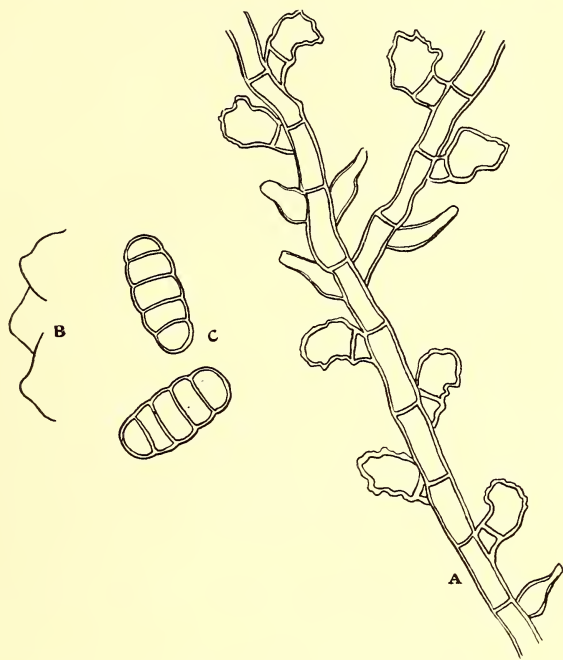


FIG. 2.—*Meliola scabra*. (a) Mycelium with both capitate and mucronate hyphopodia; (b) superficial cells of perithecium; (c) spores.

Perisporina meliolicola Doidge n. sp.

Hyphis ramosis, septatis, tenuibus, 3–3.5 μ cr., peritheciis atris, subglobosis, glabris, membranaceis, 160–180 μ diam.; ascis numerosis, paraphysatis, 8-sporis, ellipsoideis-oblongis, breviter pedicellatis, 60–66 $\times$ 18–20 μ ; paraphysibus simplicibus, filiformibus, hyalinis, ascos leniter superantibus; sporidiis distichis v. subtristichis, primum hyalinis, cellula superiore brevior, latior, deinde, 3-septatis, clavatis, ad septa, vix constrictis, cellulis extremis valde minoribus, 25–30 $\times$ 7–11 μ .

Hab. in mycelio *Meliolae glabrae* et *Meliolae tortae* in foliis *Trichocladi criniti*, Izelini Forest, Kingwilliamstown, 14/6/15 (9064).

Another point to which I wish to draw attention is the nomenclature of the *Meliola* commonly found on *Rubus* and also recorded on *Pygeum africanum*. The early collections of this fungus were submitted to Sydow

for determination, and he, following Gaillard,* named the fungus *Meliola manca*. In a recent publication † F. L. Stevens writes as follows :

"In 'Le Genre *Meliola*,' Gaillard writes under *Meliola manca* the three species *M. manca*, *M. sanguinea*, and *M. puiggarii*, giving a new description of *M. manca*. This new description mentions larvaeform perithecial appendages. The original description of *M. manca* by Ellis and Martin mentions no such appendages, but does specifically state that there are no perithecial appendages. My own material of the two collections is ample. I have studied it carefully, also a specimen of the Heller collection, and a specimen collected by Martin and distributed by Ellis as N.A.F. No 1292, all of these upon the same host (*Myrica cerifera* L.). These specimens all agree perfectly, and agree with the original description. They do not have larvaeform perithecial appendages, and therefore do not conform with the description as given by Gaillard.

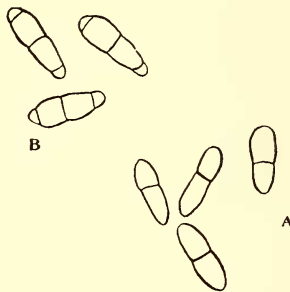


FIG. 3.—*Perisporina melioliicola*. (a) Immature and (b) mature spores.

"The specimens of *Meliola* which have been found on *Rubus* agree well with the description of *Meliola puiggarii*. They have abundant larvaeform appendages, and cannot be placed under *M. manca*. Moreover, both the general characters of the mycelium and the capitate hyphopodia separate the forms on *Rubus* from those on *Myrica*, the hyphopodia on *Rubus* being much larger and more irregular in shape. I am forced, therefore, to regard the description given by Gaillard for *M. manca* as erroneous, and that of Ellis and Martin as correct, and to recognise *M. puiggarii* on *Rubus* as an entirely different species."

In view of the evidence thus clearly set forth, and after examining specimens of both species kindly sent me by Mr. Stevens, I am driven to conclude that the South African specimens on *Rosaceae* which have abundant larvaeform perithecial appendages should be named *M. puiggarii*. The South African specimens agree with the Porto Rico specimens of *M. puiggarii*, the only difference being that the larvaeform perithecial appendages are, if any-

* 'Le Genre *Meliola*,' p. 37.

† "The genus *Meliola* in Porto Rico," 'Illinois Biol. Monographs,' vol. ii, No. 4.

thing, less numerous and rather shorter on the South African specimens. I have also to record this fungus on a number of new hosts in addition to those already mentioned, as follows :

Meliola puiggarii Speg.

On leaves of *Rubus rigidus*, Winter's Kloof, Natal, 17/6/11, E. M. Doidge (1574); Woodbush, Zoutpansberg Dist., 5/8/11, E. M. Doidge (1771); Cramond, Natal, 3/6/12, I. B. Pole Evans (2405); Knysna, C.P., 3/6/12, P. J. Pienaar (2425).

On leaves of *Rubus pinnatus*, Buccleuch, Natal, 20/4/16, J. M. Sim (10150).

On leaves of *Pygeum africanum*, Woodbush, Zoutpansberg, 3/8/11, E. M. Doidge (1761).

On leaves of *Cliffortia strobilifera*, van Staden's Pass, 13/11/17, E. M. Doidge (10859).

On leaves of *Cliffortia ferruginea*, van Staden's Pass, 13/11/17, E. M. Doidge (10861).

On leaves of *Leucosidea sericea*, Nottingham Road, Natal, 8/4/11, P. v. d. Bijl (Natal Herbarium, No. 596).

I wish also to call attention to an error in the Explanation of Plates which was overlooked in correcting the proofs. Plate LXIII, fig. 24, is named *Meliola Peglerae*; this figure illustrates *M. inermis*; and the fig. 25, Plate LXI, which is called *M. inermis*, should be *M. Peglerae*.